Microsoft Azure Fundamentals: Data

Understanding Microsoft Azure Storage Queues

Bob Tabor | http://www.LearnVisualStudio.NET
@bobtabor

What we already know about Azure Storage Queues

- Messages are inserted into Queues and kept in order until they are “delivered” (de-queued)
- Simple First-In-First-Out queue in the cloud
- Each queue message can only be 64k (plenty!) but a queue can hold 200 TB of messages!
- Enables highly scalable applications allowing multiple queue writers to work with multiple queue readers.
- Handles unexpected spikes in traffic

Anatomy of Messages

- Messages can be strings (UTF-8) or byte arrays
- Typical messages contain:
  - some proprietary message format (an XML document, comma-delimited file, etc.)
  - A serialized object or object graph (Ideally both writer and reader would depend on the same interfaces … ideally)
- Messages have an expiration date which is, by default, 1 week

Processing Queues

- To process (read) a queue, a reader will grab a bunch of messages (max: 32) off a queue in a single request
- These are hidden – not removed – until the reader deletes (de-queues) them OR the reader times out, at which point they are un-hidden allowing another reader to attempt to process them.
- Message contents and timeouts can be modified
- Messages can be “peeked” at, which does not hide them on the queue (you can also peek at the number

Why queues are awesome

- Reduces the possibility that data is lost due to timeouts to the data store or long running processes
- Allows applications to accept data from a user then throw it over the wall to the reader (i.e., a web job, worker role, backend process, etc.)
- The reader will get to it eventually – or to handle more load, just add more instances of the reader temporarily
- Send messages between disparate systems

Best examples:

- http://bit.do/azure-queues

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